

ABSTRACT OF THE DISCLOSURE

The present invention is generally directed to a multi-pass rendering system and method. In one embodiment, in first pass of a graphics primitive data through a graphics pipeline, a compressed z-buffer is generated for the primitive. A primitive
5 mask is also generated, which indicates whether all pixels of the primitive are hidden from view. In a second pass, graphics data for a given primitive is passed through the pipeline, only if the primitive mask for that primitive indicates that some portion of the primitive is visible. Thereafter, a two-level z-test is performed on that primitive. In the two-level z-test, a first level comparison is made on groups of pixels at a time,
10 using the compressed z-buffer created in the first pass.